

A NEW AFROTROPICAL SPECIES OF *ALLOGNOSTA* OSTEN SACKEN  
(DIPTERA: STRATIOMYIDAE)

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*Abstract.*—*Allognosta njombe*, new species, is described from localities around the north end of Lake Nyassa in Tanzania (type locality) and Malawi. A key to the four known species of Afrotropical *Allognosta* is provided. Additional locality records are given for *A. stuckenbergae* Lindner and *A. tessmanni* Enderlein.

*Key Words:* Beridinae, Tanzania, Malawi

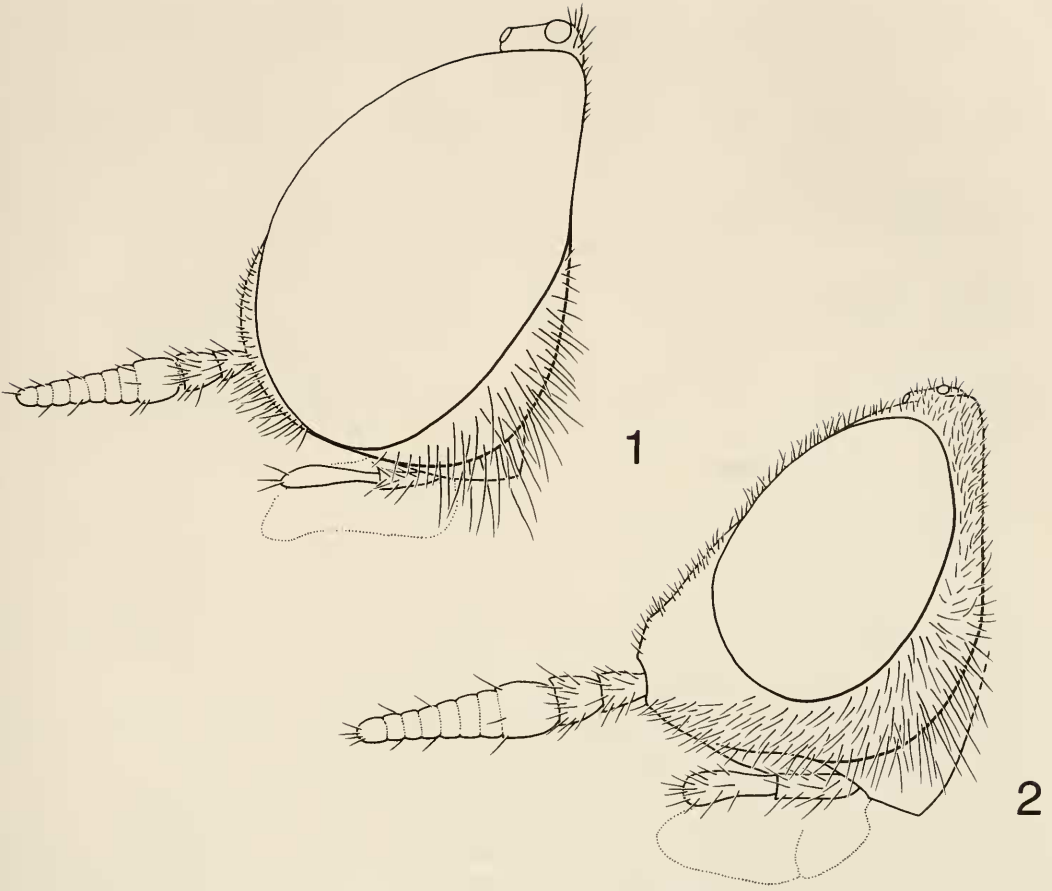
The genus *Allognosta* Osten Sacken is the only genus of the stratiomyid subfamily Beridinae in the Afrotropical Region. When I reviewed the Afrotropical species (Woodley 1987) I had available only 12 specimens representing three species, although about seven additional specimens of *A. stuckenbergae* Lindner were known at that time. A small number of additional specimens have come to light, including some of a new species, that are reported upon in this paper. Since my review of the African species, I have published a revision of the world genera of Beridinae (Woodley 1995) which can be consulted for general information and cladistic relationships at the generic level within the Beridinae as well as an overview of the genus *Allognosta*.

Terminology and methodology follow that used in my previous paper (Woodley 1987) except that the aedeagal complex is now called the phallic complex (Sinclair et al. 1994). Specimens studied are from the Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, USA (CMNH); Natal Museum, Pietermaritzburg, Natal, South Africa (NMP); and Naturhistoriska riksmuseet, Stockholm, Sweden (NRS). The sections on material examined under al-

ready described species treat only specimens seen since my 1987 paper.

KEY TO AFROTROPICAL SPECIES OF  
*ALLOGNOSTA*

1. Pilosity of eyes long and dense, easily visible at low magnifications; occurring only in South Africa . . . . . *A. stuckenbergae* Lindner
- Pilosity of eyes short and sparse, visible only at higher magnifications; occurring north of South Africa . . . . . 2
2. Apical one-third to one-fourth of middle and hind femora darkened, strongly contrasting with whitish-yellow basal portions; second segment of palpus yellow . . . . .  
. . . . . *A. tessmanni* Enderlein
- Middle and hind femora yellowish, without strongly contrasting darker areas; second segment of palpus black . . . . . 3
3. Female frons strongly produced, the antennae inserted below the prominence; male with median lobe of phallic complex similar in diameter and equal in length to lateral lobes; pleura wholly yellowish, only vaguely darker beneath wing base . . . . . *A. bwamba* Woodley
- Female frons moderately produced (Fig. 2), the antennae inserted at the apex of the prominence; male with median lobe of phallic complex in dorsal view (Fig. 5) more slender and shorter than lateral lobes; pleura usually brownish to brownish-black, nearly concolorous with scutum, but sometimes paler . . . . .  
. . . . . *A. njombe*, n. sp.



Figs. 1-2. Left lateral views of heads of *Allognosta njombe*. 1, Male. 2, Female.

***Allognosta njombe* Woodley, new species**  
(Figs. 1-7)

**Diagnosis.**—This species is in a group easily distinguished from *A. stuckenbergae* by having nearly bare eyes. It differs from *A. tessmanni* Enderlein in having all femora wholly dark yellow. It is most similar to *A. bwamba* Woodley, but differs in having darker pleura, a less strongly produced frons in females, and different male genitalia.

**Description.**—*Male:* Head (Fig. 1) black, 1.5 time higher than long; eye large, upper ommatidia larger than lower ones, but size transition not sharply delimited; ocellar tubercle moderately prominent; face short, receding; frons very small, slightly convex; head mostly whitish-gray tomen-

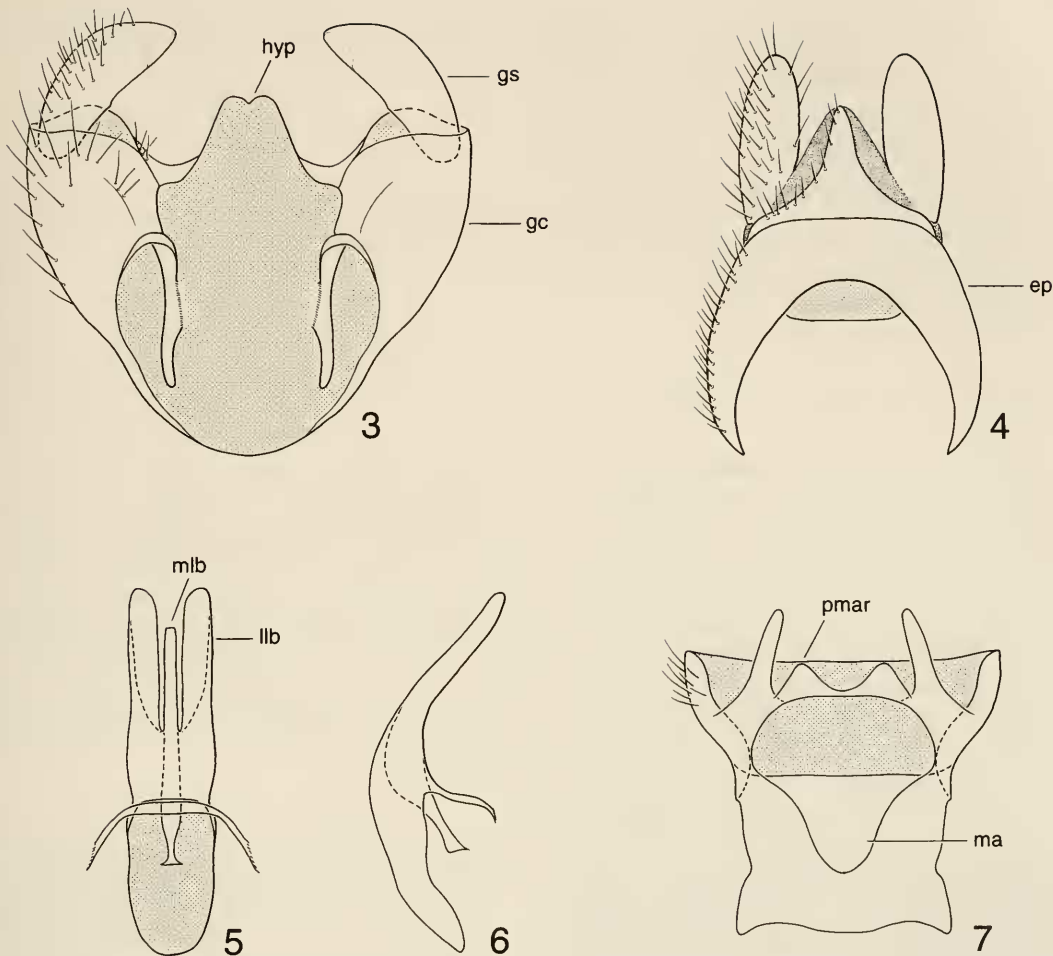
tose, sparse on frons, face, and upper occiput, almost absent on ocellar tubercle; pilosity sparse, pale on lower occiput and gena, more brownish on face; eye with extremely short, sparse pilosity, visible only at high magnification; antenna 0.8 length of head, ratio of segments 4:4:[5:2:3:3:3:2.5:3.5], scape and pedicel brownish-yellow, flagellomeres 1-3 yellow, those beyond three brownish; hairs on scape and pedicel moderately short, dark; first flagellomere with usual subapical dark hairs, other flagellomeres with a few scattered hairs; palpus slender, the two segments subequal in length, the second slightly clavate; both palpal segments dark brownish with pilosity mostly pale, but with a few dark hairs at apex of second segment; proboscis dark

brownish. Thorax with scutum and scutellum blackish-brown with slight bronzy reflections, postpronotal lobe slightly paler, postalar callus dark yellowish; pleura dark brownish, but posterior half of anepisternum and katepisternum and entire anepimeron orangish-brown; pleura with pale tomentum but with noticeable bare area on ventral half of katepisternum; scutum and scutellum entirely, densely pilose with short, semi-erect brownish hairs, posterior part of scutum and scutellum with some longer, more erect hairs intermixed; pleura with pale pilosity except anterior half of anepisternum and entire meron and katepimeron apilose; coxae dark yellow, anterior pair slightly suffused with brown; femora dark yellowish, posterior pair a little more brownish; tibiae brownish; tarsi dark brownish, basal portions of first tarsomeres vaguely more yellowish; pilosity on legs mostly dark, some pale hairs intermixed on femora, entirely pale on coxae, scattered longer, erect hairs present on femora and tibiae; wing moderately infuscated with grayish-brown, pterostigma and veins brownish, entire wing set with dense microtrichia; halter dark brownish, basal portion of stem paler. Abdomen brownish, tergal grooves slightly darker; entire abdomen with sparse tomentum; pilosity of tergites mostly very short, dark, but longer laterally and basally, some hairs on first tergite pale, pilosity of sternites pale; terminalia with gonocoxites (Fig. 3) moderate in size, margins diverging posteriorly; apex of hypandrium moderately produced, the apex of the process feebly bilobed; gonostylus with lateral margin slightly arcuate, otherwise simple; phallic complex (Figs. 5–6) arcuate in profile, median lobe shorter and more slender than lateral lobes; epandrium (Fig. 4) small, unmodified. Length 5.3 mm.

*Female:* Differs from male as follows: Head (Fig. 2) 1.2–1.3 times higher than long, strongly dichoptic, eye with ommatidia uniform in size; frons 0.4–0.5 width of head at ocellar tubercle, produced at lower portion to meet upper facial margin, the an-

tennae being inserted at anterior-most point of head in profile; upper frons with margins very slightly diverging ventrally, lower part appearing vaguely depressed, overall shiny and finely punctate; lower frons very short, slightly convex; face short, strongly receding; upper occiput margins produced posterodorsally with sharply rounded margins; upper frons and upper occipital margins without tomentum, lower frons and face with dense, pale grayish tomentum; upper frons and occipital margins with moderately dense pale golden pilosity; palpus more robust than in male, second segment more strongly clavate. Thorax with scutum and scutellum as in male but with very slight metallic purplish reflections; pilosity of scutum and scutellum shorter than in male, uniform in length, entirely pale golden colored; pleura brownish to brownish-black, vaguely paler below wing (uniformly paler in specimen from Malawi; see remarks below); hind coxa sometimes darkened; all femora uniformly dark yellowish; tibiae brownish-black, approximately basal one-third of fore and middle femora yellow, hind femur only vaguely pale at extreme base; tarsi uniformly brownish-black. Abdomen with tergites with vague purplish reflections; sternites slightly paler in color than tergites; furca (Fig. 7) with median aperture large, emarginate anteriorly; postero-medial margin triangularly emarginate medially; spermathecal ducts unsclerotized posteriorly; cerci short, second segment about 0.7 length of first. Length 5.6–6.0 mm.

Type material.—Holotype ♂ (NRS) from Tanzania is labeled: "S TANGANYIKA Melando Forest 30 mi S of Njombe 2,450 m. 10.1962 leg. *G. Heinrich*/HOLOTYPE ♂ *Allognosta njombe* N. E. Woodley 1999." The locality of collection is in Iringa Province in Tanzania. The specimen is missing the right front tarsus and the left middle tibia and tarsus, otherwise it is in excellent condition. The terminalia are stored in glycerin in a microvial on the specimen pin. Allotype ♀, 3 ♀ paratypes



Figs. 3–7. Male and female terminalia of *Allognosta njombe*. 3, Genital capsule, dorsal view. 4, Epandrium and postgenital segments, dorsal view. 5, Phallic complex, dorsal view. 6, Phallic complex, left lateral view. 7, Female furca, ventral view. Abbreviations: *ep*, epandrium; *gc*, gonocoxites; *gs*, gonostylus; *hyp*, hypandrium; *llb*, lateral lobe of phallic complex; *ma*, median aperture of female furca; *mlb*, median lobe of phallic complex; *pmar*, posteromedial margin of female furca.

(NRS, USNM): Tanzania: Mbeya Province, Rungve Mt., 2,600 m, 8–11.1962, G. Heinrich. 3 ♀ paratypes (NRS): Tanzania: Mbeya Province, Rungve Mt., 20 mi. SSE Mboya [probably = Mbeya], 2,600 m, 1962, G. Heinrich. 1 ♀ paratype (CMNH): Malawi: Chitipa District, Jembya Reserve, 18 km SSE Chisenga, 10-08S, 33-27E, 1,870 m, 1–10 January 1989, J. Rawlins, S. Thompson.

Distribution.—Known only from high-

land localities in Malawi and Tanzania around the north end of Lake Nyassa.

Etymology.—The species name is a noun in apposition based on the name of the type locality.

Remarks.—This species is most similar to *Allognosta bwamba* Woodley. The elongation of the anterior region of the head in females is similar in the two species, although in *A. njombe* the antennae are inserted at the apex of the anterior most por-

tion of the head, not below it. The overall structure of the male terminalia is similar in the two species, especially the shape of the posterior margin of the hypandrium. Although no phylogenetic analysis has been done on *Allognosta*, it seems probable that these two species are closely related. None of the other Afrotropical species of *Allognosta* have been collected in the vicinity of Lake Nyassa.

*Allognosta stuckenbergae* Lindner

*Allognosta stuckenbergae* Lindner 1961: 1.

Material examined.—SOUTH AFRICA: 1 ♂, 1 ♀, Natal, Pietermaritzburg, Town Bush, xi.1976, R. Miller (NMP); 1 ♂, Transvaal, 12 km. S Sabi, 2530BB, indigenous bush, 3.xii.1976, R. Miller (NMP); 1 ♀, Cape Province, Hogsback, 3226DB, forest and forest margins, 13–16.xii.1985, J. & B. Londt (NMP); 2 ♀, Cape Province, Tsitsikama Coastal National Park, Stormsriviermond, 34°02'S, 23°53'E, moist medium high coastal forest with *Podocarpus*, 15–19.x.1994, Michael Söderlund, Malaise trap (NRS); 1 ♂, Cape Province, Tsitsikama Forest Reserve, 33°58'S, 23°54'E, moist high indigenous forest with *Podocarpus*, 14–19.x.1994, Michael Söderlund, Malaise trap (NRS); 1 ♀, Cape Province, Bloukrans Pass at Varkrivier, 33°57'S, 23°38'E, coastal rainforest in ravine, 14–19.x.1994, Michael Söderlund, Malaise trap (NRS).

Remarks.—All of the new locality data fit within the known range of *A. stuckenbergae* in the eastern half of South Africa.

*Allognosta tessmanni* Enderlein

*Allognosta tessmanni* Enderlein 1921: 182.

Material examined.—UGANDA/ZAIRE: 1 ♀, North of Lake Edward, Gyldenstolpe (NRS).

Remarks.—This specimen was collected on an expedition headed by Nils Gyldenstolpe along the northern parts of Lake Edward from 4 April to 6 May 1921 (Thomas Pape, personal communication).

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